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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,744	10/05/2006	Horst Schulz	ZAHFRI P879US	4293

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EXAMINER	
LE, DAVID D	

ART UNIT	PAPER NUMBER
3655	

MAIL DATE	DELIVERY MODE
01/26/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/588,744	SCHULZ ET AL.	
	Examiner	Art Unit	
	David D. Le	3655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 October 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *20-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *20-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 August 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *08/09/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This is the first Office action on the merits of Application No. 10/588,744, filed on 05 October 2006. Claims 20-37 are pending.

Documents

2. The following documents have been received and filed as part of the patent application:

- Declaration and Power of Attorney, received on 10/05/06
- Information Disclosure Statement, received on 08/09/06
- Copy of Foreign Priority Document, received on 08/09/06

Information Disclosure Statement

3. The information disclosure statement filed on 09 August 2006 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document. It has been placed in the application file, but the information of references DE-195 25 831 A1 and DE-197 20 255 A1 referred to therein has not been considered.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims are rejected under 35 U.S.C. 102(b) as being anticipated by U. S. Patent No. 6,220,984 to Schulz et al. (hereinafter referred to as Schulz).

Claims:

Schulz (i.e., Figs. 1-8; column 7, line 23 – column 10, line 38) discloses a planetary gear comprising:

- Planetary gears (i.e., Fig. 2, elements 4, 6, 8, 10) rotatably mounted on a planetary gear carrier (i.e., Fig. 2, element 24) and in tooth contact with a ring gear (i.e., Fig. 2, element 12a) and a sun gear(i.e., Fig. 2, element 2);
- Planetary gear axles (i.e., Fig. 2) being retained at an inclined angle (α) in the planetary gear carrier (24);
- Wherein the planetary gears are disposed axially displaceable upon the planetary gear axles coordinated therewith (i.e., Fig. 2);
- An adjusting mechanism (i.e., Fig. 4, element 54 or Fig. 5, element 64) for adjusting a position of the planetary gear in the planetary gear train for a backlash, the adjusting mechanism being operatively situated between the planetary gear carrier (24) and the planetary gears (i.e., Fig. 4 or 5);
- Wherein the sun gear (2) has an approximately cylindrical external toothing (i.e., Fig. 2);
- Wherein a cone angle of tooth flanks of the planetary gears is adapted to an inclined angle (α) of the planetary gear axles so that tooth flanks of the sun gear (2) and tooth flanks of the planetary gears mesh with one another over a whole tooth width (i.e., Fig. 8);

- Wherein the inclined angle (α) of the planetary gear axles corresponds at least approximately to the cone angle of the tooth flanks of the planetary gears (i.e., Fig. 8);
- Wherein the inclined angle (α) of the planetary gear axles corresponds at least approximately to half the cone angle of the tooth flanks of the ring gear (i.e., Fig. 8);
- Wherein the planet carrier (24) is rotatably mounted in the ring gear (i.e., Fig. 2);
- Wherein two bearings (i.e., Fig. 2, elements 30 and 32) are provided on both sides of a toothing plane of the planetary gears;
- Wherein bearings between the ring gear and the planet carrier are slanted bearings in an O-arrangement (i.e., Fig. 2);
- Wherein the planet carrier is connected with an output shaft of the gear train (i.e., Fig. 2);
- Wherein the sun gear (2) is connected with to an input shaft (i.e., Fig. 2, element 20) of a prime mover;
- Wherein the adjusting mechanism, between planetary gear carrier and ring gear, comprises at least one of operative fitting discs (i.e., Fig. 2, element 26) and spacer discs (i.e., Fig. 4, elements 54) which determine an axial position relative to each other;
- Wherein the adjusting mechanism operatively situated between planetary gear carrier and planetary gears are spacer pieces (54) located coaxially relative to the planetary gear axles;

- Wherein the adjusting mechanism operatively situated between planetary gear carrier and planetary gears are adjusting springs (i.e., Fig. 5, element 64) coaxial with the planetary axles;
- Wherein the adjusting mechanism operatively situated between the planetary gear carrier and the planetary gears are continuously feedable set screw (i.e., Fig. 5) inserted in the planetary gear carrier;
- Wherein at least one of the planetary gears and the ring gear have an incision (i.e., Fig. 4);
- Wherein the incision in the planetary gears is designed revolving with rotational symmetry (i.e., Fig. 4);
- Wherein several peripherally spaced incisions are located in the planetary gears (i.e., Fig. 4); and
- Wherein the planetary gear is capable of producing a reduction ratio of less than or equal to twelve.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Hori (U. S. Patent No. 5,242,336) teaches a planet gear apparatus, as shown in Fig. 1.
- Mochizuki et al. (U. S. Patent No. 5,240,462) teaches a planetary reduction gear, as shown in Fig. 6.

- K. Davis (U. S. Patent No. 1,499,763) teaches a speed reducing mechanism, as shown in Fig. 8.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Le whose telephone number is 571-272-7092. The examiner can normally be reached on Mon-Fri (0900-1730).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David D. Le/
Primary Examiner, Art Unit 3655
01/20/2009

ddl